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ORR REVIEW OF COMMENTS FROM [redacted]
ON ECONOMIC ESTIMATES ON NIE-33

CIA/RR IP-300

16 July 1952

Note

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25X1C

ORR REVIEW OF COMMENTS [redacted]
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25X1C

[redacted] in commenting on NIE-33 ("Soviet Control of the European Satellites and Their Economic and Military Contributions to Soviet Power, through Mid-1953"), questioned two estimates and requested evidence for several other estimates therein on economic matters. 1/* ORR has reviewed these comments, with special reference to the ORR contribution to NIE-33. 2/ ORR conclusions are as follows:

25X1C 1. [redacted] had substantial grounds for questioning the estimates made in NIE-33 (paragraph 27) concerning the engineering industries of the European Satellites.**

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(1) The estimate that the output of the European Satellite engineering industries in 1950 was about one-half the output of the Soviet engineering industry was based on the ratio of the number of workers in the European Satellite engineering industries to the number of workers in the Soviet engineering industry. This method is subject to the objections that the figures available on Soviet Bloc labor forces may not be inclusive and that there may be significant differences in the productivity of labor as between the Satellites and the Soviet Union. In order to be acceptable, an estimate based on these figures should therefore be consistent with one that can be derived from evidence on production.

25X1C * Footnote references in arabic numerals are to sources listed at the end of the report.

[redacted]

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(2) [redacted] the estimate in question was not consistent with the estimates of production contained in Appendix B to NIE-33. These estimates were given for the production of selected commodities in 1950 by the European Satellites, expressed as percentages of Soviet production. Of these commodities, 10 are produced by the engineering industry (the 7 commodities listed under the general heading "Machinery Items," plus 3 others; "Heavy Electrical Machinery," "Electron Tubes" and "Electric Lamps"). The arithmetic average of the stated percentages for these 10 engineering products is 42 percent. This, however, does not mean that the total output of the Satellite engineering industries in 1950 was 42 percent of the output of the Soviet engineering industry. Not all engineering products were included in the table. What is more important, the listed products are not of equal significance.

(3) In order to meet this second objection, it is necessary to find the value of the output of each listed product for the Satellites and for the USSR which, being added, give the total values of the listed products of the engineering industries in the Satellites and in the USSR. As a rough measure of the value of each product, the US dollar price for a comparable item has been used. By weighting the commodities in this fashion, it has been found that the total value of the engineering products listed in Appendix B was less than 1 billion dollars for the Satellites ($931,150,000) and almost 3.5 billion dollars for the USSR ($3,412,900,000). Thus, when the products listed in Appendix B are considered according to their importance (as measured by their prices in US dollars), the output of the Satellite engineering industries in 1950 is found to be about one-quarter (27 percent) of the output of the engineering industry of the USSR.

(4) Several engineering products were omitted from Appendix B. Perhaps the chief of these are ships, arms, munitions, and aircraft, precision instruments, and agricultural machinery other than tractors. Were these products included, it is not likely that the ratio would be altered in favor of the Satellite engineering industries.

(5) It seems safe to conclude that the total output of the Satellite engineering industries in 1950 was more nearly one-quarter than one-half of the output of the USSR engineering industry.

25X1C b. [redacted] challenged also the estimate in NIE-33 that Czechoslovakia, Eastern Germany, Hungary, and Poland exported to the USSR in 1950 about half the total annual output of their engineering industries. The estimate refers, apparently, to the ratio of exports to output for all four countries taken together. The evidence on this question was not presented in NIE-33 and must be sought in the ORR contribution 4/ to that document. Even that contribution 25X1C does not assemble all relevant evidence. Despite some gaps in information, it does, however, contain enough material to permit a judgment on the correctness of the statement in NIE-33.

[redacted]

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(1) Czechoslovakia.

According to the ORR contribution to NIE-33, the large Czechoslovakian engineering industry provided in 1950 a surplus equal to about 50 percent of total output, a large proportion of which was exported to other members of the Soviet Bloc. 5/ In effect, the estimate made by ORR was that half the total output of the engineering industry of Czechoslovakia was exported in 1950, but not to the USSR alone. While no attempt was made in the ORR contribution to break down Czechoslovakian exports of engineering products according to their destination, it was stated that substantial quantities of particular engineering commodities had been going to the Satellites and that Czechoslovakia was still exporting a significant volume of industrial products to the West. From this estimate it follows that considerably less than half of the output of the Czechoslovakian engineering industry went to the USSR in 1950. It is possible from the data in the ORR contribution to NIE-33 to get an indirect measure of the proportion of Czechoslovakian engineering output that was exported to the USSR in 1950. The Soviet Union accounted for approximately one-quarter of all Czechoslovakian trade, about $200 million a year of both imports and exports. Of this sum, approximately $60 million (3,106 million crowns) 6/ in finished industrial machine and metal products went to the USSR in 1950. 7/ The total value of the output of the Czechoslovakian engineering industry in 1947 was estimated at approximately $690 million (34,670,000 crowns). 1950 production was much higher for the selected items on which estimates were made in the ORR contribution to NIE-33. Thus exports of the Czechoslovakian engineering industry to the USSR were no more than 10 to 20 percent of the value of the total output of the industry, allowing for plan flexibility in the above figures.*

(2) East Germany.

The engineering industry of East Germany, which is comparable in size and importance to that of Czechoslovakia, sends a considerably larger part of its total output to the USSR. The ORR contribution to NIE-33 estimated East German exports under three headings - reparations, deliveries from Soviet-owned firms, and commercial transactions. The USSR received in 1950 about DM 1 billion reparations deliveries from the engineering industry. 8/ ORR estimated that the USSR also received most of the output of Soviet-owned engineering firms in East Germany, which had a planned production of DM 1.3 billion in 1950. 9/ Through commercial channels, East Germany exported to the USSR in the first 9 months of 1950 an estimated $70 million worth of the products of its engineering industry. By projecting this figure over the last 3 months of 1950 and converting to DM at the official rate of DM 4 to $1, an estimate is obtained of DM 372 million for the total value of commercial exports of engineering products from East Germany to the USSR. 10/ If it is assumed, as in the ORR contribution to NIE-33, that

* While this conclusion seems to follow from the evidence in this document, it is a rather surprising conclusion. It leaves unaccounted for some $400 million of engineering products in 1950 which were neither used domestically nor sent to the USSR. It is at least questionable whether the other Satellites and the West received from Czechoslovakia in 1950 engineering products to the value of $400 million.

almost all the products of Soviet-owned engineering firms went to the USSR,* an estimate is obtained of DM 2.7 billion for the value of total deliveries of engineering products from East Germany to the USSR. On this basis the value of the total output of the East German engineering industry in 1950 was DM 5.2 billion, and the Soviet Union thus received about one-half of the total output of the East German industry.

(3) Hungary.

Hungary has a considerably smaller engineering industry than Czechoslovakia and East Germany. "In general, the (Hungarian engineering) industry is geared to the export market, the major share of production going to the USSR and the other Satellites." 11/ It is difficult to apportion these exports between the USSR and the other Satellites. According to the ORR contribution to NIE-33, "almost all production of the electrotechnical industry ... is exported to the USSR and constitutes probably as much as 20 percent of Soviet domestic production." 12/ However, Hungary exports to Czechoslovakia, Rumania, Poland, and East Germany large quantities of the other products of its engineering industry, 13/ and the domestic market absorbs perhaps 20 percent of the output of the industry. 14/ Thus it is not likely that much more than 50 percent of the products of the Hungarian engineering industry went to the USSR in 1950.

(4) Poland.

The engineering industry of Poland, like that of Hungary, is also not nearly so large as those of Czechoslovakia and East Germany, nor is it geared to an export market like that of Hungary. It is true that most of the production of the transportation machinery 15/ and the shipbuilding 16/ industries went to the USSR. But Poland is itself dependent upon other members of the Bloc for about one-half of its requirements of capital goods 17/ and "is importing a considerable portion of its requirements of capital goods from the Soviet Bloc." 18/ While the material in the contribution to NIE-33 is not conclusive, it appears that Poland exported in 1950 less than 50 percent of the total annual output of its engineering industries.

(5) Conclusions.

It appears safe to conclude that considerably less than one-half of the combined output of the Satellite engineering industries went to the USSR in 1950. The correct figure probably lies closer to one-third than to one-half. Of the two major engineering industries in the Satellites, those of Czechoslovakia and East Germany, the proportions of the output going to the USSR are, respectively, of the order of one-tenth and one-half. Possibly one-half of the output of the Hungarian engineering industry went to the USSR, but almost certainly less than this proportion went to the Soviet Union from Poland.

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* While this was certainly not the case, the upward bias in the estimate resulting from the adoption of this assumption may only balance the downward bias produced by neglecting the different values of the DM. The ORR contribution to NIE-33 did not systematically convert DM to dollar values.

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2. [redacted] appears to have been partly justified in questioning the accuracy of raw steel production figures in Appendix B of NIE-33.* ORR analysts have revised upward their estimate of USSR raw steel production for 1950. They now estimate that production to lie in the range of 26.3 to 27.3 million metric tons. However, the ORR analysts believe that their original estimate of 1950 raw steel production in the European Satellites -- 6.84 million tons -- is the correct one. The ORR figure breaks down as follows:

1950 Production of Raw Steel by the European Satellites

	Million Metric Tons
East Germany	0.965
Czechoslovakia	2.600
Poland	2.250
Hungary	0.775
Rumania	0.250
Total	6.840

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3. [redacted] requests for evidence to support other economic estimates appearing in NIE-33 can in part be satisfied.

25X1C a. [redacted] requested evidence for the statements in paragraphs 14 and 24 of NIE-33 concerning the Council of Economic Mutual Assistance (CEMA).** A draft of the working paper on CEMA which provided the basis for these statements in NIE-33 25X1C is attached [redacted] The paper is in large measure speculative, since supporting data are fragmentary. The statement in NIE-33 that CEMA is an "effective control mechanism" overstates the case developed in the working paper.

* We consider that Soviet and Satellite steel production has been underestimated at 25.4 and 6.8 million tons respectively. Our own estimates are 8.3 and 27.3 million tons." 19/

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It would have been more accurate to state that CEMA is one of the instruments by which the USSR attempts to establish effective control over the European Satellite economies.

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4. [redacted] requested evidence to support the statement in NIE-33 (paragraph 29) that the USSR uses Satellite channels to acquire critical materials and equipment from the West for its own industries.* There is at least one reference in the ORR contribution to NIE-33 which tends to support the statement: "The importance of German interzonal trade to the USSR is indicated by an estimate that from 60 to 70 percent of West German deliveries to East Germany are destined for the Soviet Union." 20/ Trade analysts in ORR doubt that the figure quoted (60 to 70 percent) is accurate, unless it includes materials used in East German industries which are working for the USSR. As regards the extent to which the Satellites procure scarce materials from the West for use in Soviet industry, there is a difference of opinion among ORR analysts. ORR did not and does not have at hand enough evidence to decide the question.

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5. [redacted] requested evidence for the estimates in Appendix B of NIE-33 for certain commodities, listed below, each with the primary ORR source for the estimate made on the commodities.**

a. Abrasives. A published CIA study on abrasives provided the basis for the estimate in NIE-33. 23/ CIA records do not indicate that this document was

25X1C sent [redacted] It could be furnished [redacted] 25X1C

b. Electron Tubes and Heavy Electrical Machinery. The responsible ORR analyst suggests that the evidence available to CIA is best covered in two ORR reports, which are now being processed for publication. 24/

c. Chemicals: Ammonia, Chlorine, Carbide, Sulphuric Acid, and Synthetic Rubber. The estimates made for these commodities in NIE-33 were derived from working papers prepared by the ORR chemicals analysts as studies of the chemical industry in each of the Satellite countries. Working papers subsequently completed on Soviet production of coke chemicals, caustic soda and chlorine, and

25X1C synthetic ammonia were sent [redacted] 26/ It would be difficult at this time to have additional working papers edited for transmittal [redacted] In any event, the estimates contained in NIE-33 have been superseded by more recent studies. 25X1C

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SOURCES

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1. See Secretary IAC, memo for IAC, subject: [redacted] Comments on National Intelligence Estimates, 7 Feb 1952. TOP SECRET.
2. CIA/RR Project 6-51, European Satellite Power Complex, Jul-Aug 1951. Parts of this report are designated TOP SECRET.
3. See Secretary IAC, memo for IAC, cited above.
4. CIA/RR Project 6-51, Contribution to NIE-33, cited above, Part I, Individual Satellite Countries, Economic Strengths and Weaknesses. All sections are TOP SECRET except that on East Germany, which is SECRET.
5. CIA/RR Project 6-51, Part I, Czechoslovakia, p. 94. TOP SECRET.
6. Czechoslovak Five-Year Plan for the Metal Industry. FDD, 38/41, p. 10.
7. CIA/RR Project 6-51, Part I, Czechoslovakia, p. 19.
8. CIA/RR Project 6-51, Part I, East Germany, p. 122. SECRET.
9. Ibid., p. 122.
10. Ibid., p. 38.
11. CIA/RR Project 6-51, Part I, Hungary, p. 77. TOP SECRET.
12. Ibid., p. 23.
13. Ibid., p. 24.
14. Ibid., p. 82.
15. CIA/RR Project 6-51, Part I, Poland, p. 86. TOP SECRET.
16. Ibid.
17. Ibid., p. 19.
18. Ibid., p. 19.
19. Memo, Secretary IAC for IAC, cited above. TOP SECRET.
20. Ibid.
21. CIA/RR Project 6-51: Contribution to NIE-33, Part I, East Germany, p. 32. Quotation is from [redacted] 25X1C
22. Memo, Secretary IAC for IAC, cited above. TOP SECRET.
23. CIA/RR IM-344, World Production and Distribution of Abrasives, Mar 1951. SECRET.
24. CIA/RR Project 45-51, The Electron Tube Industry in the Soviet Bloc. This report will be classified SECRET. US OFFICIALS ONLY. CIA/RR Project 46-51, The Heavy Electrical Machinery Industry in the Soviet Bloc. SECRET
25. Memo, Secretary IAC for IAC, cited above. TOP SECRET.
26. CIA/RR PR-2, The Coke-Chemical Industry in the USSR, 10 Sep 1951. SECRET. This report was furnished [redacted] on 6 Nov 1951. 25X1C
27. CIA/RR PR-4, Caustic Soda and Chlorine Industries, 12 Dec 1951. This report was furnished [redacted] on 6 Jan 1952. SECRET. 25X1C
CIA/RR PR-5, The Synthetic Ammonia Industry in the USSR, 8 Oct 1951. SECRET. This report was furnished [redacted] on 20 Nov 1951.

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SIGNATURE RECORD AND COVER SHEET

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